

**International Conference**

**Challenges in Coastal Hydrology & Water Quality**

**Baton Rouge, Louisiana, USA**

**May 21-24, 2006**

**American Institute of Hydrology  
Louisiana State University  
Louisiana State University Agricultural Center**



**LSU**



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## **A. INTRODUCTION**

More than half the world's population lives within a distance of 100 km from the coastline, and this number is expected to increase by 25% in the coming two decades. The population growth and urbanization have largely altered the natural pathway of coastal waters that play an ultimately vital role for the coastal environment. As most of the water on the land surface enters into the oceans, man's activities in both coastal and inland watersheds have led to increased loading of sediment, toxic substances, nutrients and pathogens with subsequent eutrophication, algal blooms, and hypoxia. Recent climate change has led to the rise in sea level with loss of coastal wetlands and saltwater intrusion. World's coasts face increasingly serious environmental challenges, while it is not clear how to fully measure the complexities of coastal systems.

In recent years we have been witnessing too many natural hazards, such as cyclones, hurricanes, tsunamis, earthquakes, wildfires, land loss, climate change, etc. In all of this the common denominator is water and environment and fundamental therefore is the science and engineering of water called hydrology. In this way this conference has enormous national and international significance. The lessons learnt at the conference will have broader application.

This conference aims to provide an international forum for the dissemination and exchange of current art, science and technology on coastal hydrology, water quality and their relationships to environmental problems. The conference will stimulate dissemination and promote interactions of interdisciplinary research from physical, biogeochemical, and socioeconomic solutions related to complex environmental systems in coastal regions. Discussions will also take place on hydraulic engineering and structures in coastal areas, which are frequently densely populated or sites of major industrial development. The topic of coastal petroleum and its economic relevance will also be addressed.

## **B. OBJECTIVES**

The objectives of this international conference are to:

- Provide an international forum to discuss issues in all aspects of coastal hydrology, water quality, human impacts, and water resources management in coastal regions;
- Discuss “The Mississippi Experience” as an example for the human – nature interactions in coastal regions;
- Assess the current state of the art, science, and technology in coastal watershed management including, but not limited to, flood control, channelization, wetland restoration, interactions between riverine and estuarine systems, integrated watershed management;

- Identify future research needs and priorities in coastal hydrologic and water resources management; and
- Provide all the information above to the general public through publications of proceedings papers and internet web pages.

To meet these objectives, the following conference program will be accomplished as described below.

## C. CONFERENCE PROGRAM

### C.1 Conference Organization

A conference planning committee has been established. The committee is in charge for development and implementation of the conference technical program. A conference advisory committee will be assigned to a group of distinguished professionals. The objective of advisory committee is to help steer the conference on the right course. The names and contact addresses of the members of these two committees are given below:

#### Conference Organizing Committee

<b>Chairperson</b>	
Vijay P. Singh Dept. of Civil & Environmental Engineering, LSU	Y. Jun Xu School of Renewable Natural Resources, LSU
<b>Committee Member</b>	
Baton Rouge Convention Bureau Pinki Diwan, LSU Foundation Larry Rouse, LSU	Daniel Thomas, LSU Clinton Willson, LSU

#### Conference Advisory Committee

Len Bahr, Director of Applied Research Governor's Office of Coastal Activities 1051 N. 3 <sup>rd</sup> St., Suite 138 Baton Rouge, LA	Dwight Landreneau, Secretary Department of Wildlife and Fisheries 2000 Quail Drive Baton Rouge, LA
Jan R. Boydston, Environmental Scientist Supervisor Environmental Planning Division Louisiana Department of Environmental Quality Baton Rouge, LA	Dr. Brent A. McKee, Director Tulane Center for River-Ocean Studies (CeROS) Dept. Earth and Environmental Sciences Tulane University New Orleans, LA
Virginia Burkett Member of IPCC and NSC on Water Resources USGS National Wetland Research Center 700 Cajundome Boulevard Lafayette, LA	W. Britt Paul, P.E. Assistant State Conservationist WR/RD Natural Resources Conservation Service 3737 Government Street Alexandria, LA

Paul Coreil, Vice Chancellor and Director  
Cooperative Extension Service  
Louisiana State University AgCenter  
Baton Rouge, LA

Nancy Rabalias, Professor  
Louisiana Universities Marine Consortium  
Defelice Center, 8124 Highway 56  
Chauvin, LA

John Day, Professor  
Department of Oceanography and Coastal  
Sciences Louisiana State University  
Baton Rouge, LA

Jim Shepard, Professor and Head  
Department of Forestry  
Mississippi State University  
Starkville, MS

Carlton Dufrechou, Executive Director  
Lake Pontchartrain Basin Foundation  
Three Lakeway, Ste. 2070  
Metairie, LA

Robert R. Twilley, Professor and Director  
Wetland Biogeochemistry Institute  
Louisiana State University  
Baton Rouge, LA

Gerald M. Duszynski, Acting Assistant Secretary  
Office of Coastal Restoration and Management  
Department of Natural Resources  
617 North Third Street  
Baton Rouge, LA

## C.2 Conference Technical Program

### **Sunday, May 21<sup>st</sup>, 2006**

Training Courses (9 AM – 4:30 PM):

- AIH Review Class – Surface Water
- AIH Review Class – Ground Water
- Hydrologic Field Methods

Registration (3:30 PM – 8:00 PM)

Vendor Exhibition setup

Conference reception (6:30 PM)

### **Monday, May 22<sup>nd</sup>, 2006**

Conference Opening Plenary Session (8:30 AM – 12:00 NOON)

- Opening Remarks by AIH President, Conference chairperson
- Welcome addresses by high profile figures
- Plenary Theme:  
The Mighty Mississippi and Coastal Louisiana – The Past, Present and Future
  - The Mississippi River Basin
  - Mississippi River Watershed Management
  - Coastal Wetlands Ecosystems in the Lower Mississippi
  - Linkage between the Mississippi and Culture

Concurrent Sessions (1:00 PM – 5:00 PM)

- Hydrologic and Coastal Processes
- Surface and Ground Water Interaction in Coastal Regions
- Fresh Water Resources and Saltwater Intrusion
- Flood Control and Disaster Assessment

Conference Banquet (6:00 PM – 7:00 PM)

Poster Session (4:00 PM – 7:00 PM)

Vendor Exhibition throughout the day

## **Tuesday, May 23<sup>rd</sup>, 2006**

Concurrent Sessions (8:30 AM – 12:00 NOON)

- Coastal Wetlands, Floodplains and Restoration
- GIS Applications in Coastal Hydrology Studies
- Eutrophication and Hypoxia in Coastal Waters

Concurrent Sessions (1:00 PM – 5:00 PM)

- Flood Control and Risk Analysis
- Coastal Water Quality and TMDLs
- Potential Global Change Effects on Coastal Water Resources

Vendor Exhibition throughout the day

## **Wednesday, May 24<sup>th</sup>, 2006**

AIH 25<sup>th</sup> Anniversary Symposium (8:30 AM – 12:00 NOON)

Opening Speech: (1) The Digital Watersheds by David Maidment  
(2) Objectivity During Crisis by Clint Willson

Concurrent Sessions (10:00 AM – 12:00 AM)

- Reaching a Broader Base
- Meeting Employer and Societal Needs
- Panel Discussion and Recommendations

Vendor Exhibition throughout the day

Field Trips (1:00 PM – 8:00 PM)

- Atchafalaya River Basin (Mississippi diversion)
- Mississippi River Delta National Wildlife Refuge (deltaic development)

### C.3 Conference Exhibition

Exhibition is one of the key elements for the success of a conference. This conference will attract exhibitors from various industry companies, water resources and environmental consulting firms, and governmental agencies to showcase their products and services to the attendees. To ensure that both exhibitors and attendees receive maximum benefit from the conference, we will offer stands to hydrology/water quality equipment producers, software developers, vendors, and service providers. To ensure maximum exposure for the exhibitors the conference will locate the exhibition in the area where poster presentations and session breaks will occur. This will make the conference an outstanding opportunity to network and interact among industry, researchers, and resources planners and managers in a relaxed and informal environment.

### C.4 Conference Publications

A final conference program will be published and distributed at the conference. An abstract for all presentations at the conference, both oral and poster presentations, will be required. All abstracts will be screened by a technical panel, and an acceptance letter will be sent to the senior authors. Authors of accepted presentations will be asked to submit a camera-ready paper up to 10 pages for publication, and the conference proceedings will be available on the first day of the conference.

## D. SIGNIFICANCE

Hurricane Katrina devastated southern Louisiana and much of the Gulf Coast region, leaving thousands homeless and jobless due to the extreme wind, flooding, and water-related damage. This disaster brought to the public mind an acute understanding of the importance of water, an essential element to all life which affects every human being on this planet each and every day. The study of water, hydrology, is a multi-disciplinary subject, involving areas such as biology, physiology, engineering, and coastal and environmental studies.

This conference will offer an opportunity to discuss a range of scientific and technical topics that are among the most critical issues in coastal regions. Some of these issues, such as wetland loss and restoration, climate change and sea level rise, and eutrophication of coastal waters, are of global importance. Being located on the mouth of the Mississippi River and the Northern Gulf of Mexico, Louisiana has its unique geographical position in attracting researchers, educators, practitioners, and industries working in coastal hydrology and water quality fields from the world to

this conference. This will help raise public and governmental awareness of a range of daunting environmental problems, including coastal erosion and land subsidence in coastal Louisiana. Specifically, for the state of Louisiana, this conference will allow for:

- Opportunity for Louisiana's researchers, resources managers, and general public to learn about and exchange information on water resources and wetland restoration issues with the professionals from other states and the world;
- Synthesis of current research and practices and future directions in wetland restoration and coastal environmental protection in Louisiana;
- International exposure of the State, the University, and its research and educational programs in coastal environment, engineering, and renewable natural resources.

## **E. OPPORTUNITIES**

In addition to the scientific and technical relevance, the conference offers an excellent opportunity for corporate, local business and other sponsors. The conference has received over 100 abstracts from researchers in the U.S. and foreign countries, including, among others, Australia, Brazil, Canada, China, India, Iran, Pakistan, Poland, Turkey, and United Arab Emirates. A number of 400 – 500 delegates from the academic, governmental, and industrial research, development and management sectors are expected to attend. Sponsorship for the conference will provide a unique opportunity for the supporting companies and organizations to raise their profiles and communicate their message to an international audience of leading researchers, managers, and practitioners in hydrology, water quality, wetlands, and coastal environmental sciences.

### **E.1 Sponsorship Structure**

- Gold Sponsor: \$10,000 and above
- Silver Sponsor: \$5,000 - \$9,999
- Bronze Sponsor: \$1,000 – \$4,999

### **E.2 Benefits to Sponsors**

Gold Sponsor:

- Name and logo associated with the conference
- Name and logo included on the conference web site
- Two full complimentary registrations (fully interchangeable)
- One complimentary exhibition space
- Option to expand exhibition stand at an additional cost



- Name displayed on the conference literature and recognition in final conference program
- Inclusion of promotional leaflet in every delegate bag
- Conference name may be used by the sponsor in approved publicity campaigns
- Option to sponsor a significant social event and/or item

#### Silver Sponsor

- Name and logo associated with the conference
- Name and logo included on the conference web site
- One full complimentary registration (fully interchangeable)
- Name recognition in final conference program
- Priority in choice of site and space in exhibition hall (after Gold sponsor)
- Option to sponsor a minor social event and/or item
- Conference name may be used by sponsor in approved publicity campaigns

#### Bronze Sponsor

- Name recognition in final conference program
- Name included on the conference web site
- Option to sponsor a minor social event and/or item (choice after Gold and Silver sponsors)

### E.3 Sponsoring Named Activities

Requests to assign all or part of a sponsor's contribution to a named event or activity would be welcome. Features open for sponsorship include, but not limited to:

- Conference banquet, lunches, and dinners
- Delegate bags
- Support for a keynote speaker
- Support for graduate students attending the conference
- Provision of stationery or electronic note-taking facilities
- Delegate transport between Baton Rouge Airport and conference venue
- Provision of internet access to delegates during the conference
- T-shirts for conference helpers (in particular the student secretariat)